

CLAIMS

What is claimed is:

- 1 1. A data processing system having a hard disk drive having two modes of operation, the
2 hard disk drive comprising:
3 means for setting a desired temperature range for a hard disk drive that is being tested;
4 means for, upon determining that a temperature inside the hard disk drive is below the
5 desired temperature range, changing a mode of operation of the hard disk drive from a first mode
6 of operation to a second mode of operation, wherein the first mode of operation generates less
7 heat than the second mode of operation; and
8 means for, upon determining that the temperature inside the hard disk drive is above the
9 desired temperature range, changing the mode of operation of the hard disk drive from the
10 second mode of operation to the first mode of operation.
- 1 2. The data processing system of claim 1, wherein the first and second modes of operation
2 are seek modes, and wherein the first seek mode is slower than the second seek mode.
- 1 3. The data processing system of claim 1, wherein the first mode of operation is an IDLE
2 seek mode and the second mode of operation is a rapid seek mode.
- 1 4. A data processing system of claim 1, wherein the first mode of operation has a slower
2 disk rotation speed than the second mode of operation.
- 1 5. The data processing system of claim 1, wherein the first mode of operation has a slower
2 clock speed than a second mode of operation for a processor within the hard disk drive.
- 1 6. A data processing system having hard disk drive capable of maintaining a steady internal
2 temperature during testing operations of the hard disk drive, the hard disk drive having two
3 modes of operation, the hard disk drive comprising:

4 means for setting a desired temperature range for a hard disk drive that is being tested;
5 means for, upon determining that a temperature inside the hard disk drive is below the
6 desired temperature range, changing a mode of operation of the hard disk drive from a first mode
7 of operation to a second mode of operation, wherein the first mode of operation generates less
8 heat than the second mode of operation; and

9 means for, upon determining that the temperature inside the hard disk drive is above the
10 desired temperature range, changing the mode of operation of the hard disk drive from the
11 second mode of operation to the first mode of operation.

1 7. The data processing system of claim 6, wherein the first and second modes of operation
2 are seek modes, and wherein the first seek mode is slower than the second seek mode.

1 8. The data processing system of claim 6, wherein the first mode of operation is an IDLE
2 seek mode and the second mode of operation is a rapid seek mode.

1 9. A data processing system of claim 6, wherein the first mode of operation has a slower
2 disk rotation speed than the second mode of operation.

1 10. The data processing system of claim 6, wherein the first mode of operation has a slower
2 clock speed than a second mode of operation for a processor within the hard disk drive.

1 11. A data processing system having hard disk drive capable of being rapidly warmed before
2 testing, the hard disk drive having a first and second mode of operation, the hard disk drive
3 comprising:

4 means for setting a desired temperature range for a hard disk drive that is to be tested;
5 and

6 means for, upon determining that a temperature inside the hard disk drive is below the
7 desired temperature range, setting a mode of operation of the hard disk drive to a first mode of
8 operation, wherein the first mode of operation generates more heat than a second mode of
9 operation, until the desired temperature range is reached.

1 12. The data processing system of claim 11, wherein the first and second modes of operation
2 are seek modes, and wherein the first seek mode is faster than the second seek mode.

1 13. The data processing system of claim 11, wherein the first mode of operation is a rapid
2 seek mode and the second mode of operation is an IDLE seek mode.

1 14. The data processing system of claim 11, wherein the first mode of operation has a slower
2 disk rotation speed than the second mode of operation.

1 15. The data processing system of claim 11, wherein the first mode of operation has a slower
2 clock speed than a second mode of operation for a processor within the hard disk drive.